

AMENDMENT UNDER 37 CFR § 1.111
Serial No. 09/725,921

AMENDMENTS TO THE CLAIMS

This listing of the claims replaces all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1. [ORIGINAL] A method of enabling distributed transaction oriented telephony functionality for telephony services deployed in a broadband packet network, the method comprising steps of:
 - a) at a first network element, encapsulating a functional content of a transaction message in a Protocol Data Unit (PDU) of the broadband packet network;
 - a) forwarding the PDU through the broadband packet network to a second network element; and
 - b) invoking the functionality using the encapsulated transaction message functional content.
2. [ORIGINAL] A method as claimed in claim 1, wherein the distributed transaction oriented telephony functionality comprises intelligent network/advanced intelligent network (IN/AIN) functionality.
3. [ORIGINAL] A method as claimed in claim 1, wherein the broadband packet network comprises any one or more of: an Asynchronous Transfer Mode (ATM) network; an internet Protocol (IP) network; a Frame Relay (FR) network; and an Integrated Services Digital Network (ISDN).
4. [ORIGINAL] A method as claimed in claim 3, wherein the broadband packet network comprises an IP Network, and the PDU comprises a Session Initiation Protocol (SIP) message envelope.

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5. [ORIGINAL] A method as claimed in claim 1, wherein the first network element comprises a media gateway controller adapted to enable telephony signal traffic through the broadband packet network.
6. [ORIGINAL] A method as claimed in claim 1, wherein the second network element comprises an application server adapted to invoke the functionality using transaction message functional content.
7. [ORIGINAL] A method as claimed in claim 6, wherein the application server comprises either one of:
 - a) a CCS network element adapted to send and receive PDU's of the broadband packet network; and
 - b) a network element of the broadband packet network.
8. [ORIGINAL] A method as claimed in claim 1, wherein the step of encapsulating the functional content of the transaction message comprises the steps of:
 - a) formulating a transaction message; and
 - b) inserting the formulated transaction message into a payload portion of the PDU.
9. [ORIGINAL] A method as claimed in claim 8, wherein the transaction message comprises either one of a Transaction Capabilities Application Part (TCAP) message and an Intelligent Network Application Part (INAP) message.
10. [ORIGINAL] A method as claimed in claim 1, wherein the step of encapsulating the functional content of the transaction message comprises a step of mapping the transaction message onto the PDU.
11. [ORIGINAL] A method as claimed in claim 10, wherein the transaction message comprises a Transaction Capabilities Application Part (TCAP) message.

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12. [ORIGINAL] A method as claimed in claim 11, wherein the step of mapping comprises a step of mapping a TCAP message type onto a respective message type of the PDU.
13. [ORIGINAL] A method as claimed in claim 12, wherein the TCAP message type comprises any one or more of: query; response; conversation; unidirectional; and abort.
14. [ORIGINAL] A method as claimed in claim 10, wherein the transaction message comprises an Intelligent Network-Application Part (INAP) message.
15. [ORIGINAL] A method as claimed in claim 14, wherein the step of mapping comprises a step of mapping an INAP message type onto a respective message type of the PDU.
16. [ORIGINAL] A method as claimed in claim 15, wherein the INAP message type comprises any one or more of: begin; end; continue; unidirectional; and abort.
17. [ORIGINAL] A method as claimed in claim 10, wherein the step of mapping comprises a step of mapping a transaction message parameter onto a respective PDU message parameter.
18. [ORIGINAL] A method as claimed in claim 17, wherein the transaction message parameter comprises any one or more of: an origination address and a destination address.
19. [ORIGINAL] A method as claimed in claim 17, wherein the transaction message parameter is mapped to a respective overhead field of the PDU.
20. [ORIGINAL] A method as claimed in claim 10, wherein the step of mapping comprises a step of mapping an encoded message payload into a payload of the PDU.

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21. [ORIGINAL] A method as claimed in claim 20, wherein the encoded message payload is mapped into a payload portion of a MIME part of the PDU.
22. [ORIGINAL] A method as claimed in claim 21, wherein the transaction message comprises two or more encoded payload portions.
23. [ORIGINAL] A method as claimed in claim 22, wherein each encoded payload portion is mapped to a respective individual MIME payload.
24. [ORIGINAL] A method as claimed in claim 22, wherein the encoded payload portions are mapped to a common MIME payload.
25. [ORIGINAL] A system adapted for enabling distributed transaction oriented telephony functionality for telephony services in a broadband packet network, the system comprising:
 - a) a first network element adapted to encapsulate a functional content of a transaction message in a Protocol Data Unit (PDU) of the broadband packet network; and
 - b) a second network element adapted to invoke the functionality using the encapsulated transaction message functional content.
26. [ORIGINAL] A system as claimed in claim 25, wherein the distributed transaction oriented telephony functionality comprises intelligent network/advanced intelligent network (IN/AIN) functionality.
27. [ORIGINAL] A system as claimed in claim 25, wherein the broadband packet network comprises any one or more of: an Asynchronous Transfer Mode (ATM) network; an internet Protocol (IP) network; a Frame Relay (FR) network; and an Integrated Services Digital Network (ISDN).

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28. [ORIGINAL] A system as claimed in claim 25, wherein the broadband packet network comprises an IP Network, and the PDU comprises a Session Initiation Protocol (SIP) message envelope.
29. [ORIGINAL] A system as claimed in claim 25, wherein the first network element comprises a media gateway controller adapted to enable telephony signal traffic through the broadband packet network.
30. [ORIGINAL] A system as claimed in claim 25, wherein the second network element comprises an application server adapted to invoke the functionality using transaction message functional content.
31. [ORIGINAL] A system as claimed in claim 30, wherein the application server comprises either one of:
- a) a CCS network element adapted to send and receive PDU's of the broadband packet network; and
 - b) a network element of the broadband packet network.
32. [ORIGINAL] A system as claimed in claim 25, wherein the first network element comprises:
- a) means for formulating a transaction message; and
 - b) means for inserting the formulated transaction message into a payload portion of the PDU.
33. [ORIGINAL] A method as claimed in claim 32, wherein the transaction message comprises either one of a Transaction Capabilities Application Part (TCAP) message and an Intelligent Network Application Part (INAP) message.
34. [ORIGINAL] A system as claimed in claim 25, wherein the first network element comprises means for mapping the transaction message onto the PDU.

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35. [ORIGINAL] A system as claimed in claim 34, wherein the transaction message comprises a Transaction Capabilities Application Part (TCAP) message.
36. [ORIGINAL] A system as claimed in claim 35, wherein the means for mapping comprises means for mapping the TCAP message type onto a respective message type of the PDU.
37. [ORIGINAL] A system as claimed in claim 36, wherein the TCAP message type comprises any one or more of: query; response; conversation; unidirectional and abort.
38. [ORIGINAL] A system as claimed in claim 34, wherein the transaction message comprises an Intelligent Network–Application Part (INAP) message.
39. [ORIGINAL] A system as claimed in claim 38, wherein the means for mapping comprises means for mapping an INAP message type onto a respective message type of the PDU.
40. [ORIGINAL] A system as claimed in claim 39, wherein the INAP message type comprises any one or more of: begin; end; continue; unidirectional and abort.
41. [ORIGINAL] A system as claimed in claim 34, wherein the means for mapping comprises means for mapping a transaction message parameter onto a respective PDU message parameter.
42. [ORIGINAL] A system as claimed in claim 41, wherein the transaction message parameter comprises any one or more of: an origination address and a destination address.
43. [ORIGINAL] A system as claimed in claim 42, wherein the transaction message parameter is mapped to a respective overhead field of the PDU.

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44. [ORIGINAL] A system as claimed in claim 34, wherein the means for mapping comprises means for mapping an encoded message payload into a payload of the PDU.
45. [ORIGINAL] A system as claimed in claim 44, wherein the encoded message payload is mapped into a payload portion of a MIME part of the PDU.
46. [ORIGINAL] A system as claimed in claim 45, wherein the transaction message comprises two or more encoded payload portions.
47. [ORIGINAL] A system as claimed in claim 46, wherein each encoded payload portion is mapped to a respective individual MIME payload.
48. [ORIGINAL] A system as claimed in claim 46, wherein the encoded payload portions are mapped to a common MIME payload.
49. [CURRENTLY AMENDED] A network node adapted to enable distributed transaction oriented telephony functionality for telephony services in a broadband packet network, the node comprising means for encapsulating at least a functional content of a transaction message in a Protocol Data Unit (PDU) of the broadband packet network, and wherein the node comprises either one of:
- a) a media gateway controller operative to enable telephony signal traffic through the broadband packet network; and
 - b) an application server operative to invoke IN/AIN functionality using TCAP functional content.
50. [ORIGINAL] A node as claimed in claim 49, wherein the distributed transaction oriented telephony functionality comprises intelligent network/advanced intelligent network (IN/AIN) functionality.
51. [ORIGINAL] A node as claimed in claim 49, wherein the broadband packet network comprises any one or more of: an Asynchronous Transfer Mode (ATM) network; an

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internet Protocol (IP) network; a Frame Relay (FR) network; and an Integrated Services Digital Network (ISDN).

52. [ORIGINAL] A node as claimed in claim 51, wherein the broadband packet network comprises an IP Network, and the PDU comprises a Session Initiation Protocol (SIP) message envelope.

53. [CANCELLED]

54. [CURRENTLY AMENDED] A node as claimed in claim 5349, wherein the application server comprises either one of:

- a) a CCS network element adapted to send and receive PDU's of the broadband packet network; and
- b) a network element of the broadband packet network.

55. [ORIGINAL] A node as claimed in claim 49, further comprising:

- a) means for formulating a transaction message; and
- b) means for inserting the formulated transaction message into a payload portion of the PDU.

56. [ORIGINAL] A node as claimed in claim 55, wherein the transaction message comprises either one of a Transaction Capabilities Application Part (TCAP) message and an Intelligent Network Application Part (INAP) message.

57. [ORIGINAL] A node as claimed in claim 49, further comprising means for mapping the transaction message onto the PDU.

58. [ORIGINAL] A node as claimed in claim 57, wherein the transaction message comprises a Transaction Capability Application Part (TCAP) message.

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59. [ORIGINAL] A node as claimed in claim 58, wherein the means for mapping comprises means for mapping a TCAP message type onto a respective message type of the PDU.
60. [ORIGINAL] A node as claimed in claim 59, wherein the TCAP message type comprises any one or more of: query; response; conversation; unidirectional; and abort.
61. [ORIGINAL] A node as claimed in claim 57, wherein the transaction message is an Intelligent Network Application Part (INAP) message.
62. [ORIGINAL] A node as claimed in claim 61, wherein the means for mapping comprises means for mapping the INAP message type onto a respective message type of the PDU.
63. [ORIGINAL] A node as claimed in claim 62, wherein the INAP message type comprises any one or more of: begin; end; continue; unidirectional; and abort.
64. [ORIGINAL] A node as claimed in claim 57, wherein the means for mapping comprises means for mapping a transaction message parameter onto a respective PDU message parameter.
65. [ORIGINAL] A node as claimed in claim 64, wherein the transaction message parameter comprises any one or more of: an origination address and a destination address.
66. [ORIGINAL] A node as claimed in claim 64, wherein the transaction message parameter is mapped to a respective overhead field of the PDU.
67. [ORIGINAL] A node as claimed in claim 57, wherein the means for mapping comprises means for mapping an encoded message payload into a payload of the PDU.

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68. [ORIGINAL] A node as claimed in claim 67, wherein the encoded message payload is mapped into a payload portion of a MIME part of the PDU.
69. [ORIGINAL] A node as claimed in claim 68, wherein the transaction message comprises two or more encoded payload portions.
70. [ORIGINAL] A node as claimed in claim 69, wherein each encoded payload portion is mapped to a respective individual MIME payload.
71. [ORIGINAL] A node as claimed in claim 69, wherein the encoded payload portions are mapped to a common MIME payload.